Appl. No. 09/731,571
Amdt. Dated May 26, 2005
Reply to Office Action of January 5, 2005

Express Mailing Label No.:
EV 524793895 US

REMARKS/ARGUMENTS

A.   THE CLAIMS

Claims 28 and claims 30-47 remain in this application. Claim 29 has been canceled. At the direction of the examiner, the claims have been renumbered to correct an error in the original numbering sequence. No new matter has been added by these amendments.

B.   CLAIM REJECTIONS

Claim Rejections - 35 U.S.C § 103

Examined claims 28-32, 40, 41 and 42 have been rejected under 35 U.S.C § 103(a) as being unpatentable over U.S. Patent No. 6,738,362 to Xu et al. (hereinafter, "Xu '362") in further view of U.S. Patent No. 6,539,482 to Blanco et al. (hereinafter, "Blanco"). Claims 33-37 and 43 have been rejected under 35 U.S.C § 103(a) as being unpatentable over Xu '362 in further view of Blanco, in further view of U.S. Patent No. 5,898,780 to Liu, et al (hereinafter, "Liu"). Claims 38, 39, 45, 46 and 47 have been rejected under 35 U.S.C § 103(a) as being unpatentable over Xu '362 in further view of Blanco, in further view of Liu, and in further view of U.S. Patent No. 6,151,628 to Xu et al.

Independent claim 28 (as amended) recites the following limitations:

28.   A method for dial roaming outside of a home service region comprising:

dialing into a local dial access provider;

creating an access request comprising user identifying information and home region identifying information;

forwarding the access request from a network access server (NAS) to a corporate remote authentication dial-in user service (RADIUS) server;

determining from the home region identifying information whether the home region supports Lightweight Directory Access Protocol (LDAP) authentication;

if the home region does not offer LDAP authentication, then:

proxying the access request to a regional RADIUS server associated with the user's home region;

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> comparing the user identifying information in the access request with user identifying information stored in a regional user database accessible to the regional RADIUS server; and
>
> if the user identifying information in the access request matches the stored user identifying information, then:
>
>> authenticating the user; and
>>
>> providing configuration information to the NAS to allow access to a network of the home region.

The examiner determined that Xu '362 did not teach or disclose the limitation, "determining from the home region identifying information whether the home region supports Lightweight Directory Access Protocol (LDAP) authentication." The examiner found that Blanco taught this limitation at Col. 4, lines 45-53:

> According to the RADIUS protocol, like for other high-level protocols such as TACACS and LDAP, information is exchanged in the form of attributes. Each attribute has a unique attribute identifier and an attribute value.

To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). MPEP §2143.03, 8th Ed. (Rev. 2, 2004). Further, "[o]bviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art." MPEP §2143.01, 8th Ed. (Rev. 2, 2004).

It is also well established that if a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). MPEP §2143.01, 8th Ed. (Rev. 2, 2004). If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims prima facie obvious. In re Ratti, 270 F.2d 810, 123

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USPQ 349 (CCPA 1959). In re Ratti, 270 F.2d 810, 123 USPQ 349 (CCPA 1959). MPEP §2143.01, 8th Ed. (Rev. 2, 2004).

Further, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990) (Claims were directed to an apparatus for producing an aerated cementitious composition by drawing air into the cementitious composition by driving the output pump at a capacity greater than the feed rate. The prior art reference taught that the feed means can be run at a variable speed, however the court found that this does not require that the output pump be run at the claimed speed so that air is drawn into the mixing chamber and is entrained in the ingredients during operation. Although a prior art device "may be capable of being modified to run the way the apparatus is claimed, there must be a suggestion or motivation in the reference to do so." 916 F.2d at 682, 16 USPQ2d at 1432.). MPEP §2143.02, 8th Ed. (Rev. 2, 2004).

The examiner determined that one skilled in the art would have been motivated to combine Xu '362 with Blanco to include a means to recognize the protocol used of the home service provider. This motivation was said to have been driven by a desire to increase the ability of a service provider to provide wireless Internet coverage. The examiner cited Blanco to support this finding of motivation:

> Making any authentication procedure use the directory service is however not straightforward. Although directory service protocols, such as LDAP, provide authentication possibilities for restricting access to the directory, they are not compatible with the protocols used for user authentication on the network, such as RADIUS and TACACS. (Blanco, Col. 4, lines 1-6).

Blanco describes the use of the lightweight directory access protocol (LDAP) to establish a directory to which all authentication requests will be referred regardless of the protocol used to make the request. This is accomplished by using a front-end application and a client for each authentication protocol to be supported. The front end application is an interface between a central directory service (using LDAP) and a client using the corresponding authentication protocol. The front-end also behaves as the server for clients

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using the corresponding authentication protocol. To illustrate this behavior, for a RADIUS authentication protocol, a RADIUS server needs to compare the user identifier and the password with predefined values which, in a conventional system, are stored in a dedicated file. According to the Blanco, the front-end's RADIUS server, instead of retrieving this data in a file, will make the front-end's LDAP client fetch it from the directory service. For this purpose, the front-end converts the required RADIUS attributes to LDAP attributes using an attribute mapping table. The LDAP client then conventionally issues a request to the LDAP server for data associated with the LDAP attributes needed by the RADIUS server.

Applicant respectfully submits that that there is no suggestion or motivation to combine Blanco with Xu '362 and that to do so would be defeat the purpose of the Xu '362 patent. The Xu '362 patent is directed to a improvements in network architecture to produce improvements in scaleablity. According Xu -

> The present invention represents an improvement to the above approaches contemplated by the prior art. The present invention contemplates distributing the home agent functionality across multiple devices, with one device devoted to handing the registration and authentication functions, and another device devoted to the routing and tunneling functions of a home agent. The present inventors have appreciated that the: former functions, i.e., registration and authentication, are not particularly computationally intensive, and that a single general purpose computing device can handle a very large number of simultaneous registration and authentication transactions without any undue latency, management, or other problems, either alone or in concert with a RADIUS or Authorization, Authentication, and Accounting (AAA) server. On the other hand, the routing and inverse tunneling functions of a home agent are more CPU-intensive and better suited to more robust devices designed for such purposes, such as switches and routers. Thus, the present distributed home agent design of the present invention overcomes the scaling and management problems presented by prior art approaches and represents a simple, cost effective, and easily managed solution for providing mobile IP network services, particularly for large scale providers of such services. (Xu '362, Col. 3, lines 17-50.)

Applicant respectfully submits that adding a front-end application and a client for each authentication protocol to be supported and adding a central directory service (using LDAP) to Xu '362 would be contrary to the stated objective of Xu '362 of providing a

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simple, cost effective, and easily managed solution. Even assuming that such a combination would be technically feasible, the motivation to combine must come from the references themselves. There is no suggestion in either reference to make these changes. Applicant respectfully submits that the examiner's rationale for combining the two references does not meet this requirement.

Assuming that references may be combined, the combination of Xu '362 and Blanco does not teach or disclose the limitation, "determining from the home region identifying information whether the home region supports Lightweight Directory Access Protocol (LDAP) authentication." Blanco describes a system by which a remote client is directed to a protocol front end via a network access server. As between the remote client and the protocol front end, the latter acts as a server. The front end is also an interface to a directory server. In this role the front end is a client of the directory server. The client-server relationship is a one-to-one relationship. No determination is made regarding what protocol the home region supports because in this client-server architecture, the determination is not required.

Additionally, the combination of Xu '362 and Blanco does not teach or describe the limitation, "creating an access request comprising user identifying information and home region identifying information" as recited in claim 28 (as amended). The home region identifying information is used by the present invention to determine whether the home region supports LDAP authentication. Neither Xu '362 nor Blanco make this determination and do not require or teach this claim limitation.

Because the cited references do not teach all of the limitations of claim 28 (as amended), Applicant submits that claims 28 (as amended) and the claims 30-39 that depend from claim 28 (as amended) are not obvious over the cited prior art and are, therefore, allowable in their current form.

The examiner also rejected independent claim 40 under 35 U.S.C. §103(a) as being unpatentable over Xu '362 in view of Blanco. Independent claim 40 (as amended) recites the limitations, "determine from the home region identifying information whether the home service region supports Lightweight Directory Access Protocol (LDAP)

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authentication," and "receive user identifying information and home region identifying information from the user computer." As previously discussed, these claim limitations are not taught or described by the cited references. Because the cited references do not teach all of the limitations of claim 40 (as amended), Applicant submits that claims 40 (as amended) and the claims 41-47 that depend from claim 40 (as amended) are not obvious over the cited prior art and are, therefore allowable in their current form.

Applicant respectfully requests reconsideration of the current rejection. In view of the responses and remarks made above, Applicant further requests issuance of a timely Notice of Allowance in this case. Should any further questions arise concerning this application or in the event the above amendments do not place the application in condition for allowance, Applicant respectfully requests a telephone interview. Please contact Jon Roberts at the number listed below.

Respectfully Submitted,

By _____

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